



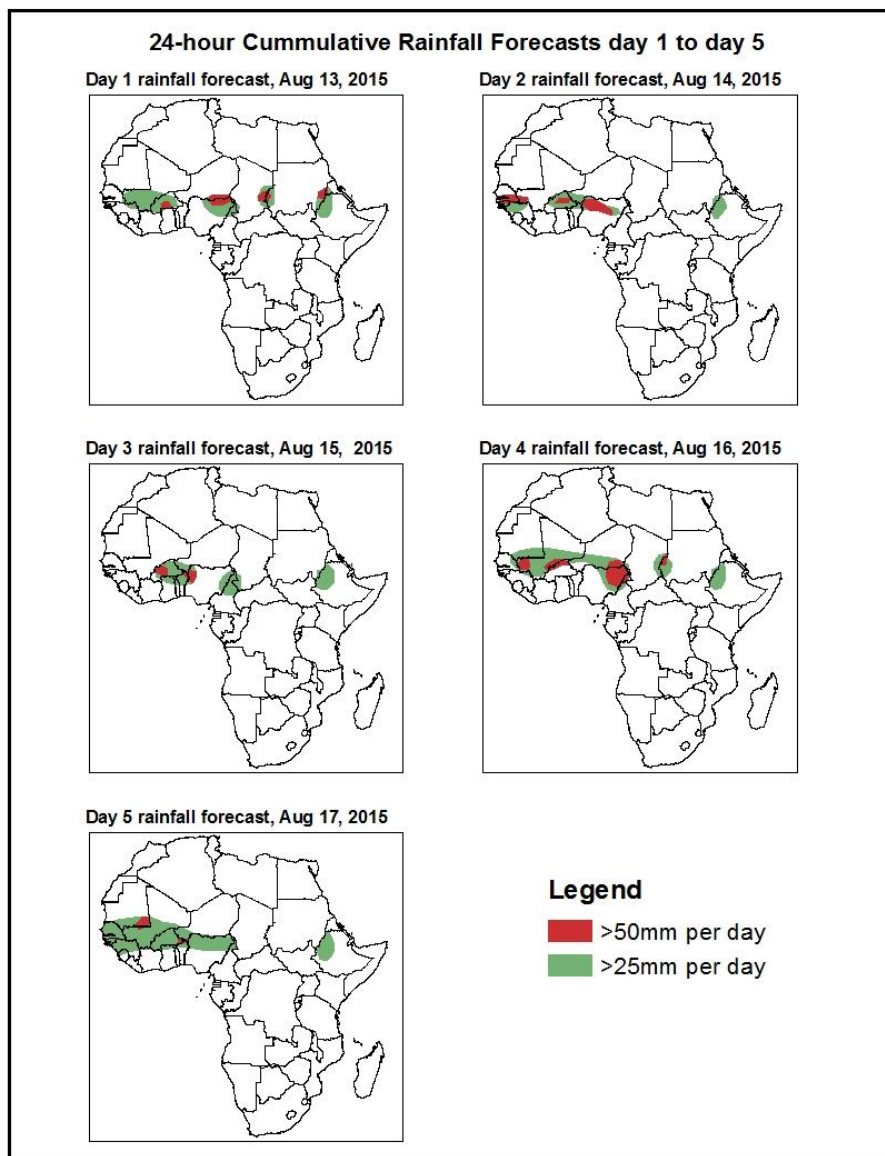
NCEP Contributions to the WMO Severe Weather Forecasting Demonstration Project (SWFDP) and to the African Monsoon Multidisciplinary Analysis (AMMA) Initiative

1. Rainfall and Dust Concentration Forecasts

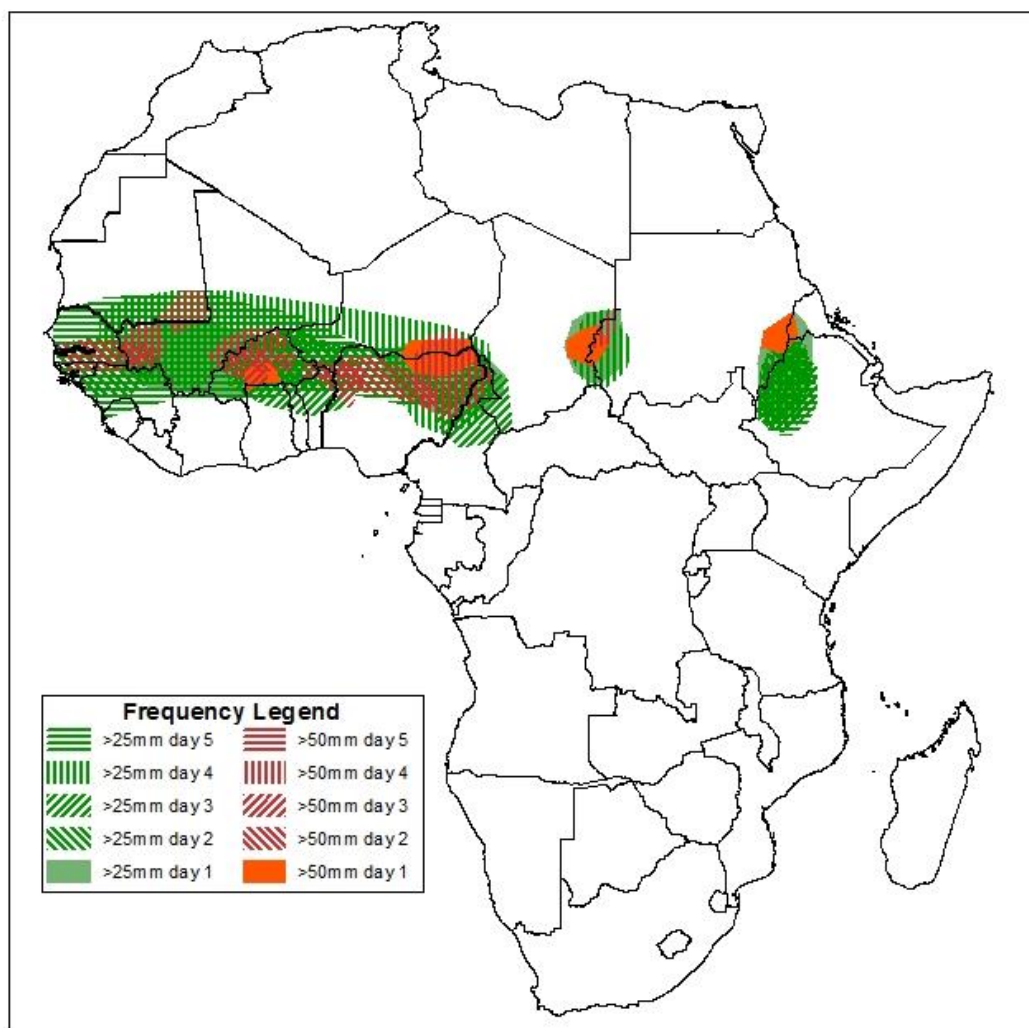
Valid: 06Z of Aug 13 – 06Z of Aug 17 2015. (Issued at 1500Z of August 12, 2015)

1.1. 24-hour Cumulative Rainfall Forecasts

The forecasts are expressed in terms of high probability of precipitation (POP), based on the NCEP/GFS, ECMWF and the NCEP Global Ensemble Forecasts System (GEFS) and expert assessment.



Five Days Forecast Summary Aug 13 - Aug 17, 2015



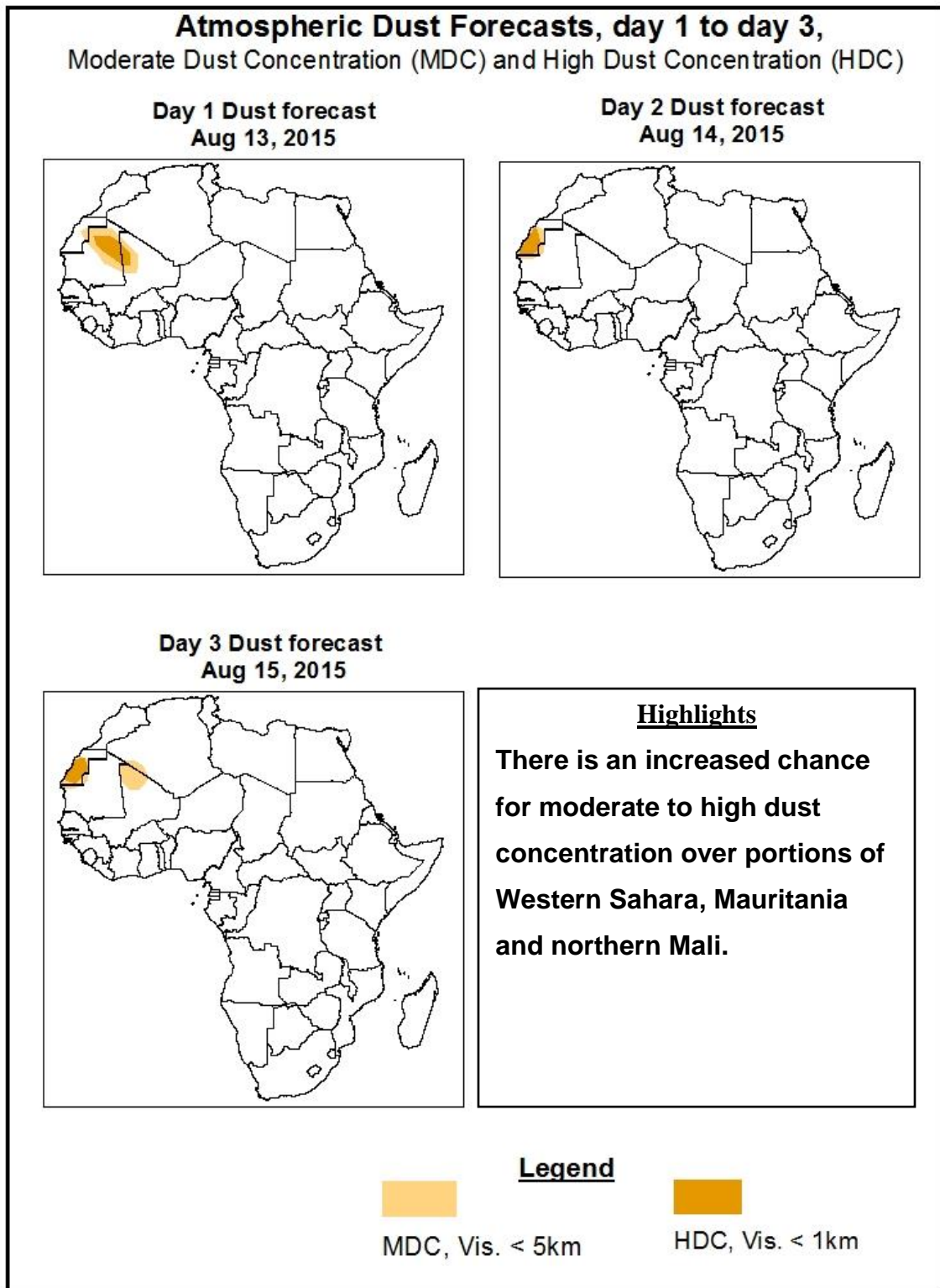
Summary

- *In the next five days, westward propagating cyclonic circulation across West Africa, and lower-level wind convergences across the Sahel region and parts of the Greater Horn of Africa are expected to enhance rainfall in their respective regions.*
- *There is an increased chance for frequent moderate to locally heavy rainfall across portions of the Sahel region and western Ethiopia.*

1.2. Atmospheric Dust Concentration Forecasts

Valid: 12Z of Aug 13– 12Z of Aug 15, 2015

The forecasts are expressed in terms of high probability of dust concentration, based on the Navy Aerosol Analysis and Prediction System, NCEP/GFS lower-level wind forecasts and expert assessment.



1.3. Model Discussions, Valid: Aug 13 – Aug 17, 2015

The Azores high pressure system over Northeast Atlantic Ocean is expected to maintain an average central pressure value of 1029hpa during the forecast period, according to the GFS model.

The St Helena high pressure system over the Southeast Atlantic Ocean is expected to intensify slightly, with its central pressure value is increasing from about 1032hpa to 1034hpa through 24 to 120hours, according to the GFS model.

The Mascarene high pressure system over Southwest Indian Ocean is expected to intensify, with its central pressure value decreasing from 1033hpa to 1039 during the forecast period, according to the GFS model.

The low over northern Mauritania is expected weaken while shifting westward into coastal Mauritania through 24ours. The low over northern Chad is expected to shift towards northern Mali through 24 to 72 hours, while deepening slightly, with its central pressure value decreasing from about 1007hpa to 1006hpa. Another low pressure system is expected to form near the Niger/Chad border, with an average central pressure value of 1006hpa. On the other hand, the heat low over northern Sudan is expected to maintain an average central pressure value of 1005hpa, while the low over the Red is expected to remain quasi-stationary, with an average central pressure value of 1004hpa, during the forecast period.

At 925Hpa level, a broad area of cyclonic circulation across the western end of West Africa is expected to shift westward, leaving the West Africa coast through 24 to 48 hours. Zonal wind convergence is expected to prevail near the 20°N latitude, in the region between northern Mali and Sudan during the forecast period.

At 850Hpa level, a broad area of cyclonic circulation across the western end of West Africa is expected to shift westward, leaving the West Africa coast through 24 to 72 hours. Seasonal lower-level wind convergences are expected to remain active across the Sahel region, Sudan, portions of Ethiopia, South Sudan and northeastern DRC.

At 700hpa level, an easterly wave axis near Burkina Faso/Ghana is expected to propagate westwards, leaving the West Africa coast in 72 hours.

In the next five days, westward propagating cyclonic circulation across West Africa, and lower-level wind convergences across the Sahel region and parts of the Greater Horn of Africa are expected to enhance rainfall in their respective regions. • There is an increased chance for frequent moderate to locally heavy rainfall across portions of the Sahel region and western Ethiopia.

2.0. Previous and Current Day Weather over Africa

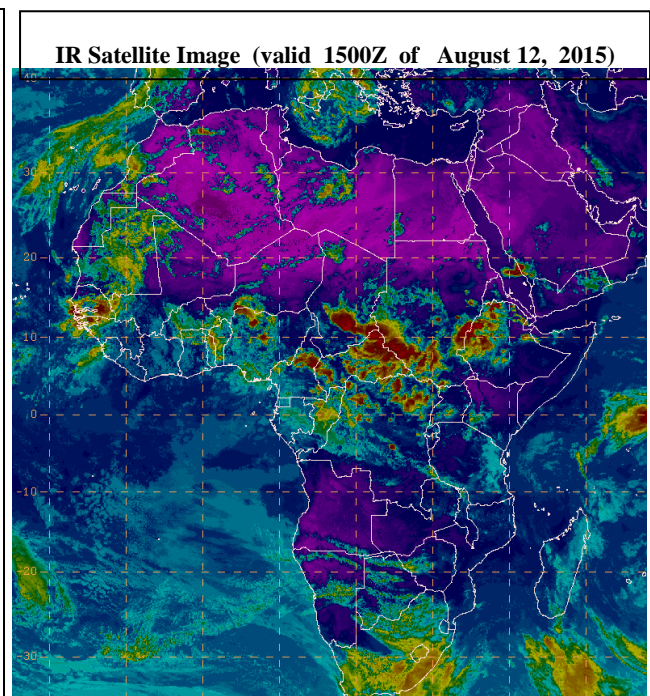
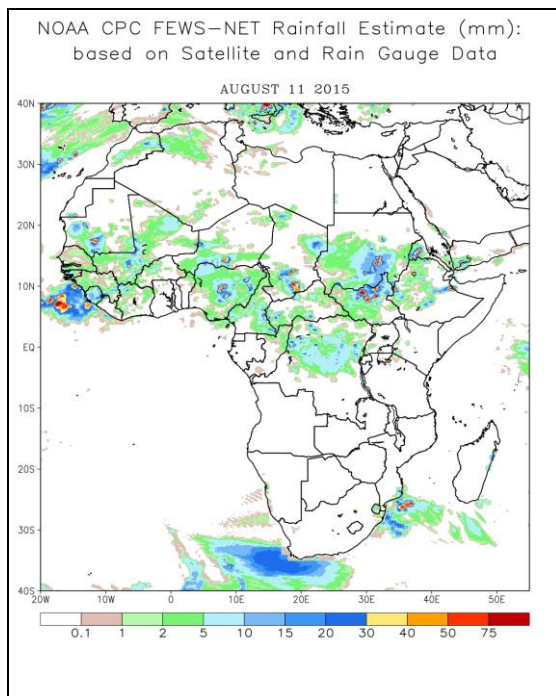
(Valid: 11 – 12 August, 2015)

2.1. Weather assessment for the previous day (August 11, 2015)

Moderate to heavy rainfall was observed over local areas in Mauritania, Guinea, Sierra Leone, Mali, Niger, Nigeria, Chad, CAR, DRC, Sudan, South Sudan, Eritrea and Ethiopia.

2.2. Weather assessment for the current day (August 12, 2015)

Intense clouds were observed over local areas in West Africa, many places in the Central Africa countries, southern Sudan and western Ethiopia.



Previous day rainfall condition over Africa (top Left) based on the NCEP CPCE/RFE and current day cloud cover (top right) based on IR Satellite image